

# Gabriel Carvalho Silva

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## Professional Summary

Software Engineer for 5 years with expertise in Java, Kotlin, Python, and modern frameworks and tools including Spring Boot, Kafka, and FastAPI. Experienced with microservices architecture, event-driven systems, and fast-paced work environments. Known for proactive collaboration and growth mindset, never being afraid to learn from constructive feedback.

## Technical Skills

**Programming Languages:** Java, Kotlin, Python, C/C++, Shell

**Frameworks & Libraries:** Spring Boot, FastAPI, Flask

**Databases:** PostgreSQL, MySQL

**Tools & Technologies:** Git, Docker, Kubernetes, AWS, Linux, MQTT, Kafka

**Languages:** English (C2), Portuguese (Native), Spanish (A2), German (A1)

## Professional Experience

### Application Engineer

Foretellix — Remote

Oct 2024 – Present

- Customer-facing engineering and requirements analysis (pre-sales/post-sales) of OpenScenario2.0 based ADAS/AV Verification and Validation (VnV) solution
- Provide custom infrastructure and software solution for client data integration for ADAS (AEB, ACC, ALKS) and AV applications using SIL, HIL, real recorded data paradigms
- Integrate industry-standard platforms (Carla) within hyper-scale cloud solutions (AWS)
- Collaborate with major automotive players (Volvo, Nvidia, Denso, Valeo) across North America, EU, and APAC
- Prototype, build and deploy custom solutions in short periods of time.
- Adapt quickly to very different and unique client contexts and projects
- **Tech Stack:** ASAM OpenScenario 2, C++, Python, Shell, AWS

### Data Engineer Intern

IEA - USP RP — Ribeirão Preto, Brazil

May 2024 – Oct 2024

- Refactored database design, reducing query times from 5+ minutes to under 2 seconds by implementing proper entity mapping, schema design and correct normalization.
- Built custom dashboards for educational data visualization and insights
- Set up on-premises services with Docker along with CI/CD pipelines
- **Tech Stack:** Linux, Shell, Python, R, PostgreSQL, Shiny, JavaScript, HTML, CSS, Leaflet, Plotly

### Data Engineer Intern

BRICS - TU Braunschweig — Germany

Aug 2023 – Feb 2024

- Developed pipeline abstraction framework with domain-specific language using Pandas and Python libraries
- Enabled data scientists to focus on domain analysis rather than programming details
- **Tech Stack:** Python

### Full Stack Developer Intern

PLRI - TU Braunschweig — Germany

Aug 2023 – Feb 2024

- Developed full-stack application with Python (FastAPI) backend, PostgreSQL database, Vue.js web frontend, and Android app for AI-aided horseshoe image diagnosis
- **Tech Stack:** Python, PostgreSQL, JavaScript, Vue, FastAPI, SQLAlchemy

## **Software Engineer Intern**

**iFood - Financial Services Tribe — Remote**

**Feb 2021 – Jan 2023**

- Implemented error mapping library with domain-specific language (DSL) for better error handling across microservices
- Developed and refactored microservices for high-scale payment services
- Contributed to architectural discussions and implemented Kafka solutions for high throughput services
- **Tech Stack:** Kotlin, Java, Golang, Spring Boot, Kafka, AWS, Hibernate, Flyway, Maven, Gradle, PostgreSQL, ScyllaDB, Redis

## **Education**

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### **Bachelor of Computer Science**

**Universidade de São Paulo (USP)**

**Mar 2020 – Dec 2025**

### **Exchange Student**

**Technische Universität Braunschweig — Germany**

**Mar 2023 – Mar 2024**

## **Key Projects**

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### **Bachelor Thesis - IoT Smart Scale**

**USP — Hybrid**

**Aug 2025 – Dec 2025**

- Development of an IoT Smart Scale proof of concept for Smart Homes with scalable architecture following Domain-Driven Design (DDD) within a hexagonal reactive architecture.
- Implementation includes an MQTT broker, API/worker services, a SQL database, and an embedded face recognition solution.
- **Tech Stack:** ESP32, Mosquitto (MQTT), Kotlin, PostgreSQL, Spring Boot, Docker

## **Leadership & Contributions**

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**Octobit Junior - Head of Projects (Jul 2024 – Mar 2025)**

**Computer Science Week - Head Director and Partner Relationship Manager (2020 – 2021)**

**GEMPRO - Co-Founder, Programming Contest Study Group (2020 – 2022)**

## **Certifications & Achievements**

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TOEFL iBT Score: 113/120 | High School Programming Competition: 2nd Place

## **References**

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**Mr. Cristiano Hahn** - Senior Software Engineer @ iFood - cristianohahn.contato@gmail.com